

From boatanchors@theporch.com Thu May 25 12:04:55 1995
Date: Thu, 25 May 1995 07:04:55 -0500
Message-Id: <Pine.3.89.9505240628.A29129-0100000@mm1001.theporch.com>
From: Kevin J Pease <kevin@mm1001.theporch.com>
Subject: <didn't bother with a subject>

Does any one out there have any command set rf coils with no home. I would like to obtain some

Kevin J Pease
WB0JZG Mt Juliet, TN.
mm1001.theporch.com

From boatanchors@theporch.com Fri May 26 00:04:34 1995
Date: Thu, 25 May 1995 19:04:34 -0500
Message-Id: <9505260002.AA12547@kahuna.math.hawaii.edu>
From: jeffrey@math.hawaii.edu (Jeffrey Herman)
Subject: Apache is gone

Gang,
Tony asked me to let all of you know that the Apache is gone. He wants to thank all 50 of you who emailed him.

Jeff NH6IL

P.S. Regarding the OB2 and OC2 VR tubes in the Galaxy GT-550, these (as mentioned before) are in series between the 180VDC (DC!) line and ground. How could they be acting as a half-wave bridge? I believe someone might need to ``...rethink their thinking.''

From boatanchors@theporch.com Fri May 26 02:00:04 1995
Date: Thu, 25 May 1995 21:00:04 -0500
Message-Id: <9505260155.AA25752@uvs1.orl.mmc.com>
From: padgett@tccslr.dnet.mmc.com (A. Padgett Peterson, P.E. Information Security)
Subject: RE: Apache is gone

>P.S. Regarding the OB2 and OC2 VR tubes in the Galaxy GT-550, these >(as mentioned before) are in series between the 180VDC (DC!) line >and ground. How could they be acting as a half-wave bridge? I believe >someone might need to ``...rethink their thinking.''

Sorry was thinking "theoretical" and not "real world" - too many hours looking at what goes on in & comes out of a pentagrid converter. Just

don't forget the musical angels.

P.fla

From boatanchors@theporch.com Thu May 25 05:40:55 1995
Date: Thu, 25 May 1995 00:40:55 -0500
Message-Id: <199505250538.WAA20912@hobbes.UCSC.EDU>
From: haynes@cats.ucsc.edu (Jim Haynes)
Subject: B-29 Radio Installation

There's a small photo in the Collins history book of the radio operator's position in the B-29. The operator is sitting at a little desk which appears to be L-shaped. Maybe that's a way to have the desk shallow and still provide a place for his elbow to rest when he's sending CW. (Which, I guess, means that left-handers have to send CW with their right hands, or take an awkward position. There is a small drawer under the desk top, looks just big enough to hold some pads of paper and pencils. (What did they write with anyway? Fountain pens? Automatic pencils? Wooden pencils? Did they carry a pencil sharpener?))

The BC348 is on the desk right in front of the operator. The ART-13 is on a shelf to the left of the desk and lower down, about the same height as the operator's seat. There is an antenna coupler above the ART-13, appears it might be mounted to a plate behind it. There is some junk under the ART-13 that I don't recognize. There is something wedge-shaped above the BC-348 - it looks like the wedge-shape is because the fuselage curves inward there. There is something, might be a sheet of paper, in front of the wedge-shaped black object. Above this is a shelf holding the command set - two transmitters on the left and three receivers on the right. This shelf appears to slope downward to the right; or maybe that's an artifact of the photograph. The operator is sitting in what looks like a very spindly chair - I would have thought they would have used a pretty hefty seat and a seat belt to protect the operator in a crash. The operator is wearing the standard AAF headphones. I can't see a microphone; but in his left hand is a switch on cords that looks like the kind of push-to-talk switch used with a throat microphone.

To the operator's right, about shoulder high, is a square panel I recognize as a radio compass control panel - I've seen one in the flesh somewhere, sometime. I've never seen what that kind of panel attaches to; there seems to be a box behind it. To the right of the radio compass is a box with a PL-55 or PL-68 clearly visible coming out the bottom. To the left of the radio compass is some other box with a label on the front. Above the compass, probably against a bulkhead, is an etched placard with a lot of words. Below the jack box is a round object, and there is also something which might be the corrugated hose for an oxygen mask. In the far corner is some object I can't recognize but it has a lot of wires.

I don't see anything I recognize as the modulator for the command set. There is an object on the left edge of the desk; perhaps it is some kind of lamp or an ashtray.

From boatanchors@theporch.com Thu May 25 11:40:55 1995
Date: Thu, 25 May 1995 06:40:55 -0500
Message-Id: <9505251137.AA04233@kali>
From: Andy Wallace <wallace@mc.com>
Subject: BC-348 blank panel w/screws?

Hey, gang...

What is that small blank (filler?) panel on the BC-348 receiver? You can see it in the May Electric Radio in the article about the LS speaker that Dave Ishmael restored. Gad he does great work...everything is so PERFECT!

Anyway, what is this small panel, and what possibly went in this place? Was it like the ART-13 LF module?

--Andy

P.S. Checked Fair's '95 catalog last night and if I want to try a couple of MAB transceivers out as a project, I'll have to dig up some RS-38 100 Ohm carbon mics, as they're not in the catalog anymore. Dang it, they also don't list the TMC oscillator I was going to get, either.

From boatanchors@theporch.com Thu May 25 16:01:59 1995
Date: Thu, 25 May 1995 11:01:59 -0500
Message-Id: <9505251553.AA22789@us2rmc.zko.dec.com>
From: harlan@csoa1.enet.dec.com
Subject: BC348 BLANK PANEL

That panel is there to gain acces to the bottom of the 1st and 2nd rf amp and mixer tubes. Very nice to have since WHEN the screen bypass caps short they'll take out the screen resistors down there.

Harlan N8ETQ

From boatanchors@theporch.com Thu May 25 18:15:36 1995

Date: Thu, 25 May 1995 13:15:36 -0500
Message-Id: <199505251811.LAA25103@hobbes.UCSC.EDU>
From: haynes@cats.ucsc.edu (Jim Haynes)
Subject: Collins tube shields

Well I found one in my collection this morning. It looks like the usual Cinch or Elco, except

It has "COLLINS" where CINCH or ELCO would otherwise be.
It is dark colored - probably was black at one time, has faded to a dark brown
It has a corrugated metal insert intended to press against the sides of the glass tube. (sides? well there's only the one cylindrical side)

Wonder how these compare with the IERC shields for cooling performance.

From boatanchors@theporch.com Fri May 26 02:45:01 1995
Date: Thu, 25 May 1995 21:45:01 -0500
Message-Id: <Chameleon.4.01.2.950525224011.jproc@>
From: jproc@worldlinx.com
Subject: Crystal Source

Dear BA's,

I should have posted this message when the hot topic of the day was crystal suppliers but I chipping away at my backlog of tasks. One or two people had mentioned unreliable vendors. Here in Canada, we have a company with a solid reputation of providing high quality crystals and service.

Lesmith Ltd.
54 Shepherd Rd.
Oakville Ont.
L6K 2G5

Phone (905) 844-4505
FAX (905) 844-2274

Any crystal cost \$15.10 each + \$5.00 S&H (Cdn funds). That would be a little under \$13 in US funds.

Regards,

Jerry Proc VE3FAB
E-mail: jproc@worldlinx.com
Radio Restoration Volunteer

HMCS Haida Toronto, Ontario

From boatanchors@theporch.com Thu May 25 22:40:47 1995
Date: Thu, 25 May 1995 17:40:47 -0500
Message-Id: <Pine.ULT.3.91.950525180217.28277B-100000@dua150.kpt.emn.com>
From: "Barry L. Ornitz" <ornitz@EMNGW1.emn.com>
Subject: Re: Energy Storage Capacitors - IMPORTANT

On Thu, 11 May 1995 TOM.A.ADAMS@mail.admin.wisc.edu wrote:

> In my search for big filter capacitors for the new rig, I encountered some
> that are marked as "energy storage" caps (I would assume they were meant for
> use with big pulsed lasers or something like that).
>
> In that service, they are rated for 4.5 KV working voltage; however I was
> told that if they're used as filter caps, they have to be derated somewhat to
> a lower working voltage.
>
> That's a new one on me, and I used to work in a capacitor factory! I don't
> know how trustworthy the source of this information is, so I'm throwing the
> question open to the collective wisdom of the BOATANCHORS Gurus.
>
> Are we talking a peak voltage rating here (i.e., the cap is rated for 4.5
> KV peak, which would include the maximum voltage excursions of the ripple you
> encounter in filter service)? Are we talking about a type of capacitor that is
> designed and built differently from a normal filter type capacitor and which
> has different characteristics?
>
> Any information on this would be greatly appreciated.
>
>

Tom, K9TA

Tom,

I can give a little information about some of the discharge capacitors made by Sangamo. A number of years ago, their plant in Pickens, SC, unloaded a batch of these units. I talked to one of their engineers who gave me a little information.

These units are designed for discharge into nearly a short circuit and as such have an extremely low internal inductance. However, they are rated for only intermittent service. The reduced DC ratings were recommended by their engineer. I am not sure there was a "hard-and-fast" rule about how much to derate them but on the units I have, the 4.5 KV Peak units were specified as 3000 VDC, and the 10 KV Peak units were specified as 6500 VDC. I have operated the smaller capacitors at 3200 VDC with no

problems but I would seriously worry about using them above 3.5 KV.

I think what is happening is the continuous ripple current heats the capacitor and Sangamo wanted to be on the safe side. In energy discharge service, they were trickle charged very slowly and discharged through a xenon flash tube to excite a ruby laser. In this service their duty cycle was extremely low. I don't believe they have a very long life in this service either.

My larger unit, 18 uF at 10 KV peak had a series inductance of 0.04 microhenries. This is less than a few inches of #12 wire!

Whatever you do - DO NOT SHORT THESE UNITS like you might do with conventional electrolytics. I did this once with a 16 uF at 4.5 KV unit charged up to only 600 volts. I burned off about 1/4 inch of the screwdriver, and could only hear ringing for about 20 minutes.

Fortunately I was wearing safety glasses. These capacitors should only be discharged through a current limiting resistor. Once discharged, keep a shorting wire across them until installed in a circuit. Dielectric absorption (the bane of audio air-heads) can surprise you with these extremely low-loss capacitors. Just leaving one sitting around with no short can sometimes develop a LETHAL voltage in one. DO NOT TAKE CHANCES!

To summarize: within their reduced ratings, energy discharge capacitors make wonderful high voltage filter capacitors. They are built quite a bit differently internally but in a properly designed circuit they will work well. Please be careful about the warnings above.

{Sorry for the late reply. I just returned to work after a bout in the hospital. To be quick, I think I have a boat-anchor body. My gall bladder was removed eight years ago and I recently passed another gallstone. It is going to take me a while to catch up with 1200 messages in the box so be patient. 73.}

Barry WA4VZQ ornitz@emn.com

From boatanchors@theporch.com Thu May 25 18:37:14 1995

Date: Thu, 25 May 1995 13:37:14 -0500

Message-Id: <9505251834.AA11518@kahuna.math.hawaii.edu>

From: jeffrey@math.hawaii.edu (Jeffrey Herman)

Subject: FREE: Heath Apache Transmitter (Boston)

Tony: I'm reposting this to the Boatanchors tube-radio mail list - I'm sure you'll get some responses so please don't throw that rig out!

73 from Hawaii,
Jeff NH6IL (ex WA6QIJ)

>I've got a very old, very big, and very heavy Heath Apache transmitter
>that I don't want to move (along with the rest of my house). It's in
>perfect working order (as far as I know -- hasn't been fired up in
>about 7 years) and includes the companion SSB adapter.
>
>It is located in Bedford, Massachusetts (near Boston) and is free for
>the taking -- but you have to come and get it.
>
>If you're interested, let me know by email. First come, first served.
>If no one takes it in the next week or so, it'll be left for the
>garbage people, which would be a shame (but not as much of a shame as
>lugging a 100-pound HF transmitter to a two-bedroom apartment in
>Downtown Boston, where it will never be used...)
>
>73,
>
>Tony Camas (N1ER)
>tony@bosauto.com

From boatanchors@theporch.com Thu May 25 21:00:16 1995
Date: Thu, 25 May 1995 16:00:16 -0500
Message-Id: <2FC4C467@sharkgate.sandiegoca.attgis.com>
From: "Kenan, Larry" <llk@sandshark.sandiegoca.attgis.com>
Subject: FW: Shack Art

The nostalgic "artwork" in my shack/harbor/refuge/home_office includes a framed Marconi stock certificate. The engraved picture on it shows the Glace Bay transmitter site. It is dated April 1, 1912 - two weeks before the Titanic sinking brought maritime radio into the news and raised it's value on the stock market.

Larry Kenan - K06SM

From boatanchors@theporch.com Thu May 25 22:09:23 1995
Date: Thu, 25 May 1995 17:09:23 -0500
Message-Id: <199505252205.RAA21885@prime.common.net>
From: JonKranz <jonkranz@aol.com> (by way of swtel@common.net (Steve Lenaghan))
Subject: Hallicrafters S-38E

My father in-law recently dug up a Hallicrafters S-38E from the basement and passed the radio on to me.

Has anyone seen one of these things before? Can you tell me anything about it (i.e.: when it was made, function of the "band spread," its relative merit as compared to other sets made in its day)?

Thanks for your help!

Jonathan Kranz

From boatanchors@theporch.com Fri May 26 01:30:13 1995
Date: Thu, 25 May 1995 20:30:13 -0500
Message-Id: <Pine.3.89.9505252106.B25725-0100000@hamp>
From: Albert S Woodhull <aswNS@hamp.hampshire.edu>
Subject: Re: Hallicrafters S-38E

Your question brings back memories...

The Hallicrafters S-38C, D, and E seemed to be the most popular entry level receivers in my Novice year (1957) and the years before, when I first got interested in radio. It had two competitors in its class, a National unit (maybe NC-54?) and the Heath AR-2 and its successor the AR-3. All of these were really basic 4-tube + rectifier jobs -- no r.f. stage, mixer, one i.f., detector/1st audio, and audio power amp. With no r.f. stage the image rejection was pretty poor on the upper bands, and there was no crystal filter or other selectivity. I always suspected the sensitivity was lacking on the highest range, too, but those were very low sunspot years and there was rarely anything interesting to hear on any band higher than 20 meters.

I don't know the National receiver in this class very well, so I can't comment on any of its features, but it was in the same price class (~\$50) as the S-38. (The Heath, as a kit, was about \$25). I had a Heath AR-2 and my buddy had an S-38, and I was quite conscious of the differences. Somehow the S-38 always sounded nicer to me, although really it wasn't quite as sophisticated a design -- the Hallicrafters didn't even have a separate b.f.o, it introduced feedback so the i.f. stage would oscillate when you wanted to receive c.w. Also, the S-38 had a transformerless "ac-dc" type power supply, it worked adequately, but that was always a mark of cost-cutting design in consumer electronics -- not to mention a safety hazard if, like me, you were always tearing into your gear to modify it.

I don't remember whether the S-38 had calibrated bandspread. I think maybe not. For me the thing I wanted more than anything was a receiver that could give the illusion of telling you what frequency you were actually

on. I think the S-38 at least had a big bandspread logging scale with a big knob, the tiny one on the Heath receiver was a real loser. Not only was the Heath's bandspread scale very small, the knob was also small, and located so close to the bottom of the receiver there wasn't any way to put a bigger knob on unless you took it out of the cabinet and mounted it on some kind of platform.

Albert S. Woodhull, Hampshire College, Amherst, MA
awoodhull@hamp.hampshire.edu
woodhull@shaysnet.com
413-549-2962

From boatanchors@theporch.com Thu May 25 15:58:53 1995
Date: Thu, 25 May 1995 10:58:53 -0500
Message-Id: <9505251547.AA22345@us2rmc.zko.dec.com>
From: harlan@csoa1.enet.dec.com
Subject: MORSE SIGNAL DEVICES

Yo'

Morse Signal was an Electronic Protection company.
Burglar/fire/holdup alarms as well as a manufacturer of the
control boxes and switches. They were bought out by Honeywell
in the late 60's. I worked for them here in Cleveland for a while
when they were owned by Honeywell. I am familiar with the Sign
you have and it can truly be considered BA material!

Dan Harlan N8ETQ
Cleve., Oh.

From boatanchors@theporch.com Thu May 25 12:11:16 1995
Date: Thu, 25 May 1995 07:11:16 -0500
Message-Id: <2FC5004A@msgw.isoft.intranet.gr>
From: Sifakis George <sifakis@isoft.intranet.gr>
Subject: MS Mail and Sender Address

For those of us who see the list through Microsoft Mail there has been the problem of the Mail program stripping the header of the message. The result of this is that the address of the original sender is lost, therefore, you

can't reply directly to him (unless he specifically signed the message).

You can keep the program from stripping the header by inserting the line

StripGatewayHeaders=0

in the "[Microsoft Mail]" paragraph of the "MSMAIL.INI" file of the windows directory (usually "c:\wingk").

The downside of this is that you now see all the header junk in the beginning of the message. There must be a way to get around this too, but I haven't figured it out yet. Decide for yourself. Now back to more interesting BA matters...

73 George Sifakis SV0KA sifakis@isoft.intranet.gr

From boatanchors@theporch.com Thu May 25 23:20:07 1995

Date: Thu, 25 May 1995 18:20:07 -0500

Message-Id: <199505252318.SAA01157@uro.theporch.com>

From: Jack Taylor <n7oo@hereford.ampr.org>

Subject: Re: My shack art

Due to overwhelming demand (well at least Keven Anderson asked) I have placed 339-340.gif, bc-339.gif and fd-1950.gif up on ftp.hereford.ampr.org in the /pub/incoming directory. The first shows the BC-339 1 KW driver next to a water-cooled BC-340 10 KW amp. The second shows a row of BC-339's in the foreground with a couple of BC-339/340 combinations in the background.

The third shows some 1950, or earlier gear set up for field day in an abandoned logging camp shop building near Coos Bay, Oregon.

73 de Jack

From boatanchors@theporch.com Thu May 25 18:28:56 1995

Date: Thu, 25 May 1995 13:28:56 -0500

Message-Id: <9505251826.AA27879@unlinfo2.unl.edu>

From: djw@unlinfo.unl.edu (Daniel Wright)

Subject: National NC-101XA w/spkr

A "friend" has a National NC-101XA receiver and matching (I think) speaker that he maybe-might-I'll-think-about-it wanna sell. I have not seen the unit yet, but a ham buddy here at work has seen it and he says it is in good condition physically...no dents,bangs,scratches,or dings...not perfect,mind you, but nice. The owner fired up the radio "about five years ago" and it worked. The

current electrical condition is unknown. I think that for a receiver of this vintage the 'ol "bring 'er up slow on a variac" would definately apply so I don't really want to plug it in and listen for BANGS or look for SMOKE!!! Is this enough information? I would obviously like to know what a radio like this is worth....also what can anyone on the list tell me about the rig?? I have the Moore book, but any additional info would be nice....

Thanks and 73 de Dan -- WA0JRD ..
djh@unlinfo.unl.edu

From boatanchors@theporch.com Thu May 25 16:04:20 1995

Date: Thu, 25 May 1995 11:04:20 -0500

Message-Id: <9505250900.ZM15696@bugs>

From: mgaidos@wv.mentorg.com (Mark Gaidos)

Subject: Need Hallicrafters cabinet

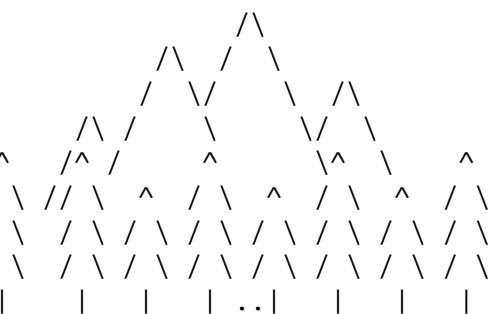
I picked up an SX-42 project. I have the chassis and panel only and need a cabinet to fit the SX-42/SX-62 (I think a 101 case is the same size also). Does anyone have a cabinet in reasonable shape that they would sell? I'm also missing the RF shield around the tuning section

assembly, so I would also like to locate one of those, or a a junker that had one. Any help with this would be greatly appreciated!

- Mark

--

^ Mark Gaidos
/ \ ^ Mentor Graphics
/ \ / \ Wilsonville, Oregon USA
/ \ / \ (503) 685-1278
| | mgaidos@wv.mentorg.com



From boatanchors@theporch.com Thu May 25 19:17:33 1995
Date: Thu, 25 May 1995 14:17:33 -0500
Message-Id: <9505251915.AA11651@kahuna.math.hawaii.edu>
From: jeffrey@math.hawaii.edu (Jeffrey Herman)
Subject: OB2 & OC2

Gang,
The Galaxy GT-550 contains an OB2 and an OC2. I believe these are voltage regulators. They are in series between the +180VDC (regulated) line and ground. Might it be possible to replace them with some sand (Zener diodes)?

I'm guessing that one is designed for 105V and the second is for 75V thus they're run in series to regulate the 180V line. Looking in the Newark catalog they list Zener voltages as a *range* such as 153-171V and 168-191V. Is this acceptable? This seems to defeat the purpose of them acting as a precision voltage regulator.

Jeff NH6IL

From boatanchors@theporch.com Thu May 25 19:56:47 1995
Date: Thu, 25 May 1995 14:56:47 -0500
Message-Id: <57230.owen@apollo.eeel.nist.gov>
From: "James C. Owen, III" <owen@apollo.eeel.nist.gov>
Subject: RE: OB2 & OC2

In message Thu, 25 May 1995 14:17:38 -0500,
jeffrey@math.hawaii.edu (Jeffrey Herman) writes:

> Gang,
> The Galaxy GT-550 contains an OB2 and an OC2. I believe these are voltage
> regulators. They are in series between the +180VDC (regulated) line and
> ground. Might it be possible to replace them with some sand (Zener
> diodes)?
>
Of course you can do it but why. The High Vacuum units work fine, are easy
to get and unlike Zener diodes have that healthy glow that lets you know
they are working.

> I'm guessing that one is designed for 105V and the second is for 75V
> OB2=108v OC2=75v both at 5-30ma

thus they're run in series to regulate the 180V line. Looking in the Newark catalog they list Zener voltages as a *range* such as 153-171V and 168-191V. Is this acceptable? This seems to defeat the purpose

> of them acting as a precision voltage regulator.
>
>The *range* given in the catalog means that the zener voltage will fall
somewhere in this range. 168-191 is a nominal 180v +- 6% unit.
My advice ---stay with the OB2 & OC2.
73 Jim K4CGY
James C. Owen, III
National Institute of Standards & Technology (NIST)
Bldg 225/B360
Gaithersburg, MD 20899
1-301-975-5623

From boatanchors@theporch.com Thu May 25 20:08:51 1995
Date: Thu, 25 May 1995 15:08:51 -0500
Message-Id: <199505252009.PAA00533@wrdis01.robins.af.mil>
From: lakeith@wrdis01.robins.af.mil (Larry Keith)
Subject: Re: OB2 & OC2

In your message of 25 May 1995 at 1434 EDT, you write:

> Gang,
> The Galaxy GT-550 contains an OB2 and an OC2. I believe these are voltage
>
> Newark catalog they list Zener voltages as a *range* such as 153-171V
> and 168-191V. Is this acceptable? This seems to defeat the purpose

Only if the OB2/OC2 tubes are carefully disassembled, the offending
non-vacuum devices are installed in a workmanlike manner, and the
tubes reassembled so that only a discerning firebottlite will notice
the difference..

Oh! You wanted to know if it would work! Sure, if the zener range is
close enough.. 8-))).

73,

Larry, KQ4BY

From boatanchors@theporch.com Thu May 25 20:25:43 1995
Date: Thu, 25 May 1995 15:25:43 -0500
Message-Id: <9505252017.AA24862@uvs1.orl.mmc.com>
From: padgett@tccslr.dnet.mmc.com (A. Padgett Peterson, P.E. Information Security)
Subject: Re: OB2 & OC2

>Oh! You wanted to know if it would work! Sure, if the zener range is

>close enough.. 8-))).

Don't forget that firebottle regulators are series devices that also act as half wave bridges while Zeners are parallel clamps - instead of blocking the out-of-phase signal, they will try to pass it, usually directly to ground. To replace an "0" with a Zener, you need to rethink your thinking.

Warmly,
Padgett

From boatanchors@theporch.com Thu May 25 22:46:54 1995
Date: Thu, 25 May 1995 17:46:54 -0500
Message-Id: <d0a0dxN000000000@MHS>
From: RICHARD_HUMPHREY@hp5200.desk.hp.com
Subject: Re: OB2 & OC2

Padgett warmly wrote:

>Don't forget that firebottle regulators are series devices that also act
>as half wave bridges while Zeners are parallel clamps - instead of blocking
>the out-of-phase signal, they will try to pass it, usually directly to
>ground. To replace an "0" with a Zener, you need to rethink your thinking.

Say what??? I've never ever seen a tube circuit that applied AC (reversing polarity) to a VR tube. Don't know what one would do if it was reversed. I've never seen a spec on the 'reverse' voltage limit of a VR tube. They're just never used that way.

For the typical radio voltage regulator, where DC is applied, a zener works quite happily.

Zeners are not parallel clamps. You may be thinking of a triac, which is two SCRs back to back parallel. A zener is just a plain old junction diode which has a controlled REVERSE voltage breakdown. When the voltage reaches the reverse breakdown point, it conducts. That's the zener voltage.

Turn it around, in the forward direction, it does behave as an ordinary 0.6 volt silicon diode, which is I guess what you are referring to. In a DC voltage regulator, the zener never sees this forward bias condition (unless you put it in wrong!).

Richard
N6NAE

From boatanchors@theporch.com Thu May 25 10:54:02 1995

Date: Thu, 25 May 1995 05:54:02 -0500
Message-Id: <Pine.BSI.3.91.950525054409.956A-100000@bermuda.io.com>
From: Signal Hill <beavis@io.com>
Subject: Orange County Surplus?

Hi, with a trip to SoCal coming up soon I am looking for any surplus/junk shops in and around Orange County. Any help will be appreciated.

Eric

From boatanchors@theporch.com Fri May 26 00:57:21 1995
Date: Thu, 25 May 1995 19:57:21 -0500
Message-Id: <199505260052.SAA17475@bock.ucs.ualberta.ca>
From: tschuld@gpu.srv.ualberta.ca (Chris Dorn)
Subject: Patient Drake Expert

Hello all,

I am a new amateur, diligently working on my code to get on the air. I have an interest in vintage ham gear, partly out of necessity, but mostly out of reverence and admiration. I find that the topics discussed here are at quite an advanced level, but if I hang around enough, maybe I'll learn something.

I own a Kenwood TS-520SE, which I suppose isn't a true boatanchor, at a mere 35lbs., and with only three tubes. However I hope it will be a good start. I have an interest in the older Drake gear as well, and am looking for someone who has the patience to answer some very basic questions about it. Up here, Drake gear is hard to come by, so I haven't seen any first hand. I have seen some photos in old QST mags.

My questions are around things like: what are the advantages over the separates vs. the transceiver in the C lines, and the differences between the various lines in general? I'm sure this has been discussed many times before, but if someone could take the time to answer these basic questions, or point me in the right direction, I would be grateful.

Chris
VE6RDC

From boatanchors@theporch.com Thu May 25 18:10:57 1995
Date: Thu, 25 May 1995 13:10:57 -0500
Message-Id: <9643CC3F41@s1.xetron.com>
From: "Jack Giehl" <JACKG@s1.xetron.com>
Subject: Penta tubes

Dear BA enthusiasts,

A friend of mine bought a Drake C line at Dayton. He told me he was going to retube it, and last night showed up at my house with a bunch of tubes he bought.

Many of the tubes were the Penta brand, in white boxes. But, to my surprise, the date codes are current! Huh? New tubes made in the good ol' USA? He has new tubes such as a 12AX7, 6EV7, 12BY7 etc. all with current date codes such as 9514 and 9518.

What's the deal with Penta tubes? They are made in California. I didn't know anyone was making tubes in the U.S. Anyone have experience with this brand of tube? We will be trying them out in the C line this weekend. I will report on any problems found.

Unfortunately, he has not gotten any 6JB6 tubes yet. If he gets a set of Penta 6JB6 tubes, I will report on those as well.

Jack

73,

=====

Jack, WB8BFS
jackg@xetron.com Loveland, Ohio (near Cincinnati)

=====

From boatanchors@theporch.com Thu May 25 22:03:48 1995

Date: Thu, 25 May 1995 17:03:48 -0500

Message-Id: <199505252201.PAA14937@mailhost.primenet.com>

From: nx7u@primenet.com (Scott Townley)

Subject: Re: Penta tubes

At 13:10 25.05.1995 -0500, Jack Giehl wrote:

>Dear BA enthusiasts,

>

>A friend of mine bought a Drake C line at Dayton. He told me he
>was going to retube it, and last night showed up at my house
>with a bunch of tubes he bought.

>

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>in the good ol' USA? He has new tubes such as a 12AX7, 6EV7,
>12BY7 etc. all with current date codes such as 9514 and 9518.

>

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>didn't know anyone was making tubes in the U.S. Anyone have
>experience with this brand of tube? We will be trying them out
>in the C line this weekend. I will report on any problems found.

>
>Unfortunately, he has not gotten any 6JB6 tubes yet. If he gets
>a set of Penta 6JB6 tubes, I will report on those as well.

>
>Jack
>

My understanding is that Penta's sales office is indeed in California, but I'm pretty sure that all their stock is manufactured overseas, primarily China. At least, every tube I've ever bought from them has stamped in itty-bitty letters, "Made in China".

Scott Townley
nx7u@primenet.com

From boatanchors@theporch.com Thu May 25 06:02:14 1995

Date: Thu, 25 May 1995 01:02:14 -0500

Message-Id: <m0sEU9c-000Hv1C@beacons.cts.com>

From: kevin@beacons.cts.com (Kevin Sanders)

Subject: Re: Radio Artwork

> PS I use the term "radio room" because I find I dislike the terms 'ham
> shack' and 'shack'. It's a room in the house, not a shack doggone it.

I call mine the "harbor" for obvious reasons.

Kevin KN6FQ

From boatanchors@theporch.com Thu May 25 21:47:21 1995

Date: Thu, 25 May 1995 16:47:21 -0500

Message-Id: <950525214406_71333.144_DHQ49-2@CompuServe.COM>

From: don merz <71333.144@compuserve.com>

Subject: Radio Room Wall Art

Another good source of artwork is early radio magazine covers. The one I like best is the RADIO NEWS issue with the BC-610 and SX-42 in Africa. The story inside was--you guessed it--the Hallicrafters/Gatti expedition.

The WWII RADIO NEWS issues with military covers also make nice wall art for folks with military gear.

From boatanchors@theporch.com Thu May 25 22:37:36 1995
Date: Thu, 25 May 1995 17:37:36 -0500
Message-Id: <"Macintosh */PRMD=MOT/ADMD=MOT/C=US/"@MHS>
From: Scott_Johnson-AZAX60@email.sps.mot.com
Subject: RE>Re- Penta tubes

RE>Re: Penta tubes

5/25/95

Rest assured these are not the Pentas of old. They are super sorry Chinese tubes that have the Penta brand on them.

>
>What's the deal with Penta tubes? They are made in California. I
>didn't know anyone was making tubes in the U.S. Anyone have
>experience with this brand of tube? We will be trying them out
>in the C line this weekend. I will report on any problems found.
>

From boatanchors@theporch.com Thu May 25 12:14:46 1995
Date: Thu, 25 May 1995 07:14:46 -0500
Message-Id: <199505251212.AA19026@shore.shore.net>
From: Michael Crestohl <mc@shore.net>
Subject: Report: Rochester NY Hamfest

Hello Heavy Metal Enthusiasts:

Cynthia and I just returned from the Rochester NY Hamfest. We arrived at 6AM on Friday, staked out a good selling spot and proceeded to cruise the grounds looking for goodies.

First off I found a ICOM IC-720A loaded with filters but in need of some repairs for a good price and once I fix it it will probably fetch a pretty decent price. Other finds include a nice Drake 2B with speaker/Q-multiplier, E F Johnson SWR bridge, Millen Transmatch Jr, digital voice keyer, nice homebrew QRP rig, a mint SBE-34 and some other bits and pieces.

We left for home (Boston) around 6PM Saturday and drove all night, stopping to nap here and there at the rest areas on the NY Thruway and Mass Pike. Paid \$8.10 to NY and \$5.60 to MA for the use of the roads, but finally

arrived in the Boston area at 5:30AM Sunday, just in time to check out the monthly MIT Flea Market. Cynthia was very tired but was a good sport and tried to snooze in the car while I ran around looking for more stuff. I found a nice military J-36 bug, WWII headphones (MINT!) and a TCS-12 (receiver, transmitter, AC supply and manual) and an old B&L microscope that needs some cleaning up on the way out.

Oh yes, I almost forgot the MINT Drake T-4XC and AC-4 in the original box I bought at Rochester NY.

All in all, I did pretty well in the selling dept too. Cynthia covered the table while I wandered and looked around for more stuff.

Now that the crush of the spring hamfests is over I'll have some time to give this stuff a close look-see. I'll also have a TCS station up for grabs soon, complete with receiver, transmitter, AC power supply and cables. On this item I would certainly prefer a local pickup!

Time to rest for a few days before heading up to Sorel Quebec for the big(?) annual Hamfest du Quebec next Sunday.

Thanks to my wife Cynthia (VE2QF) for her understanding and patience!

Michael Crestohl KH6KD/W1
mc@shore.net

From boatanchors@theporch.com Thu May 25 16:32:51 1995
Date: Thu, 25 May 1995 11:32:51 -0500
Message-Id: <m0sEfIg-000040C@next3.acme.ist.ucf.edu>
From: clarke@acme.ist.ucf.edu (Thomas Clarke)
Subject: Secret Life of Telephones (graphs)

I was watching the British Show on The Learning Channel -
The Secret Life of Machines - the telephone episode -
and the host started with the telegraph.

He said that originally they were quite complicated automatic sending and receiving devices, but then the operators noticed they could send by just taping on a switch and receive by listening to the clicks - presumably dispensing with all the unreliable

electromechanical apparatus. Thus Morse code may originally have been intended as a machine readable code.

This is an interesting story. Does anyone know if it is true?

Has anyone learned to receive ASCII by listening to the modem tones?
There was that guy who could whistle DTMF long distance codes.

Tom Clarke
KE4VFH

From boatanchors@theporch.com Thu May 25 17:05:51 1995
Date: Thu, 25 May 1995 12:05:51 -0500
Message-Id: <199505251702.NAA16701@cc01du.unity.ncsu.edu>
From: rdkeys@unity.ncsu.edu
Subject: Re: Secret Life of Telephones (graphs)

>
> I was watching the British Show on The Learning Channel -
> The Secret Life of Machines - the telephone episode -
> and the host started with the telegraph.
>
> He said that originally they were quite complicated automatic
> sending and receiving devices, but then the operators noticed
> they could send by just taping on a switch and receive by listening
> to the clicks - presumably dispensing with all the unreliable
> electromechanical apparatus. Thus Morse code may originally
> have been intended as a machine readable code.
>
> This is an interesting story. Does anyone know if it is true?

I think it is the other way around, for the following reasons.

1. Morse invented the code about 1840. Working machine telegraphs did not come into existence until about 1850. The machine telegraphs were fraught with problems, and one would not work on another's lines, errors were frequent, etc. Everyone wanted to patent or market a machine telegraph and make a killing in the early telecommunications market of the mid-1800's. But they just did not work well enough then.
2. There were some working machine telegraph systems about 1880, and from what little I have read, were well liked in England and Europe. Again, they were a bit of the mechanical monster, and very specific in installation.
3. Real mechanical telegraphs like the standard Baudot machines came in about 1900-1910 as I understand it (I may be a year or two off here --- someone correct me).

My dates may be a tad off, but it has been a year or two since I perused the bilges of the telegraph books in our library. We even have a copy of Morse's original publication (written by Alfred Vail I think, about 1840 --- it is interesting reading). Mebbee we should type that up for the BA archives, just for fun. It is only about 50 pages and maybe 20 illustrations.

> Has anyone learned to receive ASCII by listening to the modem tones?
> There was that guy who could whistle DTMF long distance codes.

Well, this sort of thing is perhaps stretching it a bit, even at 110 baud.

One can hear characteristic patterns in the Baudot machines, like the RY's etc., but I have serious doubts that one could get other than the standard leaders like CQ calls, etc. Back when I did rtty (1978 or so), it was relatively easy to pick out the CQ calls and the RY's, etc, and even tune by ear. But it was impossible to really ``read'' the machine. My dad used to tell of reading the high speed relays in his transmitters at WVB (Fort Sam Houston or Fort Bliss back in the late 20's and early 30's). He used to read the relays running about 40 or 50 or so wpm and catch what frequencies he needed to set the transmitters up on to QSY to for the main ops who were in a shack about 10 miles back at the main part of the base). This was on early RCA 5 or 10 kw telegraph transmitters. Their hamshack at the base (5AIN) used a marine RCA ET-3055 as the transmitter. It is shown in QST about 1931 or so. Apparently one can read some things, but full Baudot or Ascii is probably pushing a bit at speed.....(:+\\\.....

> Tom Clarke
> KE4VFH

73
Bob/NA4G

Someone correct my dates, cuz they's foggy in my greymatters for sure.

From boatanchors@theporch.com Thu May 25 19:13:35 1995
Date: Thu, 25 May 1995 14:13:35 -0500
Message-Id: <m0sEhzy-00001gC@next3.acme.ist.ucf.edu>
From: clarke@acme.ist.ucf.edu (Thomas Clarke)
Subject: Re: Secret Life of Telephones (graphs)

This is from haynes@cats.ucsc.edu (Jim Haynes).
He forgot to copy the list.

Well I have made some study of the old wire telegraph technology and operation, but am not an expert by any means.

The children's version of history is that Morse invented the telegraph. The revisionist version of history is that Morse took credit for a lot of things other people invented. I'm inclined to cut Morse some slack because in his day there were not technology-based corporations with employee patent agreements like we have today. So I think Morse himself pulled together four main things:

You can make a long-distance telegraph using electromagnetism.

There is a market for the service.

A practical long-distance telegraph has to use a single wire.

That means it needs a code, and it needs to be an efficient code, not something like one pulse for A, two for B, ... 26 for Z.

My understanding is that Morse's original concept was to use numbers to represent words; and maybe he was going to represent the numbers by pulses, so that 4321 would be sent as His receiver was to mark or emboss a paper tape with the codes so the operator could look them up. His sender was called a "port rule" and like a printer's composing stick would hold several blocks of material with projections that would work the contacts (wire dipping into mercury cups) as it was cranked through the sender.

Early in the business Morse got hooked up with the Vail family. They operated an iron works; and the telegraph business needed a lot of iron wire. They didn't use copper for lines because it was costly and also because the only copper available in those days was too soft to allow much of a span between poles without breaking of its own weight. Alfred Vail was one of the sons of this family and did most of the development of the telegraph as we know it; but Morse's name went on the patents. In particular it was Alfred Vail who worked out what is presently known as the Morse code. It's said that he visited a printer's shop and counted the pieces of type in the drawer to see which letters should be assigned the short codes. (I don't know why he didn't just count the letters in a newspaper article.)

So the telegraph got going with an alphanumeric code of dots and dashes and the paper tape embosser as a receiving instrument. As you noted the latter wasn't very satisfactory compared with the simplicity of the key. Technology of the day wasn't very good for making machinery; and for power they had to use weights and strings wound around drums. The operators learned they could copy the code by ear, and got permission to do it. I don't know when or by whom the "modern" sounder was invented. The tape recorders continued in use in small backwoods offices for quite some time. Just recently someone

reported on rec.antiques having one of these things; and I've seen a picture of one in a book that reproduced an old picture of a country telegraph office.

Well, actually the tape recorder was continued and improved in one application. In some cities you could have a little box on the side of your desk and when you turned the handle it would send out a code, received on paper tape at the telegraph office, and pretty soon a messenger boy would come to your office. A similar arrangement was used for file alarm boxes.

Then there were ink recorders used in ocean cable working. On cables they used a bipolar signal, Morse code but one polarity for dot and the other polarity for dash, as a way of conserving time. I believe there were some visual receivers for this code, such as a mirror galvanometer; but you can't use a simple sounder, so they usually recorded on a tape and the operator would transcribe from that. An interesting thing about this is that they pushed the signaling speed to faster than the bandwidth of the cable would allow. Thus they got intersymbol interference; and the

operators were trained to interpret what they saw on the tape. That is, if they sent two dots the current wouldn't fall to zero between them; and if you saw a dot and zero and then another dot that probably meant there was a dot and a dash and another dot faster than the cable could follow. They used mechanical transmitters in this service, driven by a paper tape with two holes plus the feed holes.

Well then the ink recorder technology led into high-speed Morse on radio. The same kind of mechanical transmitter was used as was used on cables. In fact the ARRL code practice runs used to use this kind of equipment, since it sent perfect code at any desired speed. And on a good radio circuit you can push the speed up to faster than anybody can copy by ear, like 500 WPM. If you look in ARRL handbooks of the 40s and 50s, there is an ad in the catalog section for T.R. McElroy Co., which made the high speed equipment. The sending part used perforated paper tape, and either a three-key or a full typewriter keyboard perforator. The receiving part used an ink recorder and a tape winder that pulled the tape over a bridge over a typewriter, so the operator could watch the tape and translate to typing.

From boatanchors@theporch.com Thu May 25 20:13:16 1995
Date: Thu, 25 May 1995 15:13:16 -0500
Message-Id: <9505252007.AA24816@uvs1.orl.mmc.com>
From: padgett@tccslr.dnet.mmc.com (A. Padgett Peterson, P.E. Information Security)
Subject: Re: Secret Life of Telephones (graphs)

Just two quickies on this - the A&E documentary on Marconi that aired recently (Whisper in the Air) had several shots of rooms full of operators, each with tape reels and typewriters. Also what were the "ticker tape" machines used for stock market quotes back in the '20s ?

Warmly,
Padgett

From boatanchors@theporch.com Thu May 25 21:19:10 1995
Date: Thu, 25 May 1995 16:19:10 -0500
Message-Id: <199505252113.0AA25191@hobbes.UCSC.EDU>
From: haynes@cats.ucsc.edu (Jim Haynes)
Subject: Re: Secret Life of Telephones (graphs)

I suspect the stuff you saw in the Marconi show (I didn't see it) might be the high speed CW receiving that I mentioned in a previous posting today. Look in 40s,50s ARRL handbooks for the catalog section in the back and find the T.R. McElroy ads and see if that looks anything like what you saw.

As for stock tickers: Almost as early as Morse's telegraph went commercial there were inventors working on printing telegraphs. Telegraph companies were started saying they would use one of these systems to get around the Morse patents and to avoid the need for skilled operators.

These early printing telegraphs all had the letters on a print wheel. The problem was to synchronize the printer wheel with the sending machine; and all this was done in a day when the sources of power were clock springs or weights pulling strings wound around rollers. One approach was to stop the machine, then start the wheel going and try to speed-govern it so it would stay in sync with the transmitter for a little while. The other approach was to send pulses to step the wheel around. The latter was the basis of the eventual successful stock tickers.

All the early printing telegraph companies bailed on it and switched to Morse technology. The ability just wasn't there yet to manufacture reliable mechanisms of the kind needed. The printing telegraphs needed a lot more maintenance than Morse instruments. They needed better quality lines. (Morse operators had to adjust their instruments to compensate for wet weather leakage and the like.) The printing system was not an efficient code, as it was one step for a, two for b, and so on. (Well they could have made it more efficient with one step for e, two for t, and so on; but I don't know if this was done.) The early forms of this required two or three wires; at least one to control stepping the wheel and another to drive a print solenoid when the desired character was positioned over the tape. And although the printer was fairly compact the sending machine was quite cumbersome - it had a sort of piano keyboard where the keys would stop projections on a rotating drum.

There is a story about Thomas Edison. Edison was for a number of years an itinerant telegrapher. One reason he was itinerant was that he kept getting fired for either sleeping on the job or performing unauthorized experiments

with the equipment. Eventually he landed a job in an office where some of the printing telegraph machines were being used as stock tickers.

There were reasons for this. Even though the early tickers were not very good there was a lot of desire for a printing telegraph in the stock trading business. One reason was that an unscrupulous Morse operator could delay or distort stock reports and make money on the side this way. Another reason was that even an innocent mistake could cost somebody a lot of money; and the stock reports then as now were in a highly compressed language to save time on the wire, so mistakes were not obvious. Another reason is that all the traders wanted to be sure that none of their competitors got the word before they did. Another reason is that stock reporting is a broadcast sort of service, so the cumbersome sending machine didn't matter that much, there being only one of them for many receivers. Finally, since stock trading was done in big cities the extra wiring and extra maintenance were not the problem they would be in long-haul circuits to small offices in the boondocks.

Well it was in this office that Edison saw how the ticker could be improved; and in his spare time he developed an improved ticker. He sold the rights for what was to him an incredibly large sum of money, and used the money to start a factory building the tickers. And thus was the beginning of Edison's industrial empire.

The final form of the ticker, the familiar roll of tape under a glass bell jar, was able to operate on a single wire and got its electrical power over the wire as well as its signals - that is, it didn't need a plug in the wall for a motor. One reason this was possible was the availability of commercial power, much cheaper than batteries. When the circuit is idle the system transmitted bipolar reversals at 20Hz or so. There was a polar magnet and armature assembly that followed these reversals and drove an escapement to advance the print wheel. In series with this was a nonpolarized electromagnet and armature assembly that was too massive to respond to the reversals. This operated the print hammer, and also a stop arm that kept the wheel from rotating. So at rest the polar armature was wiggling all the time but the wheel was prevented from going around.

To print a character the transmitter suppressed one of the reversals so that the print magnet operated and the stop arm came off the ratchet escapement. Then the reversals stepped the wheel around until the desired character was over the print hammer. At that point another suppressed reversal allowed the print magnet to bang the hammer into the paper. Then the wheel kept on going in synchronism with the transmitter and more characters could be printed by suppressing reversals at the right points. When there was nothing more to be printed the print wheel would complete a few revolutions and then engage the stop arm again.

I don't know when the stock markets switched from this kind of ticker to one

based on start-stop (Teletype) principles. I don't believe these used Baudot, but rather a six level code so that FIGS and LTRS shifts were not needed. I do know that about 1965 the NYSE adopted a new Teletype ticker running at 150 baud and using a mechanism that eventually was used in the short-lived Model 37 machine. And I know that the glass bell jar tickers were in use through the 1940s - there was one in my home town that received baseball scores. The customer was a news stand and smoke shop, where there were always a bunch of old geezers in the back playing dominoes. I assume they were gambling on the baseball games, but maybe I'm taking a jaundiced view. Anyway, this ticker went away about the time the town got its own radio station.

From boatanchors@theporch.com Thu May 25 21:50:14 1995
Date: Thu, 25 May 1995 16:50:14 -0500
Message-Id: <9505252147.AA16321@unlinfo.unl.edu>
From: djw@unlinfo.unl.edu (daniel wright)
Subject: shack "art"

Well....lemme see.....

Upon the walls of my 'ole radio room there resides the standard EZN holders of DX QSLs...My DeVry diploma..my old First Class Radiotelephone license (obtained the hard way when these things really meant something)...newer General Radiotelephone license....pictures of me at work at various TV staions....pictures of old rock-n-roll bands I used to be in...pictures of old friends...and my most prized decorations;pictures drawn by my kids a.k.a. "refrigerator art"!!! What's left of the walls is covered in bookshelves and shelves of smaller BAs....kinda "home(1)y"!!!!

Dan ..

From boatanchors@theporch.com Thu May 25 06:00:58 1995
Date: Thu, 25 May 1995 01:00:58 -0500
Message-Id: <m0sEU7C-000HygC@beacons.cts.com>
From: kevin@beacons.cts.com (Kevin Sanders)
Subject: Re: Shack Art

I picked up an orange metal sign at an antique store which says "Morse Signal Devices" and gives their phone number. I don't know whether this has anything whatsoever to do with my favorite operating mode or not, but it is appropriate for my shack decoration ;-)

I also consider my analog 24-hour bubble-faced clock showing UTC and local time to be an object de' art, since it's of 1952 vintage.

Is the SI swimsuit calendar considered art?

73,

Kevin Sanders, KN6FQ (SDG)
kevin@beacons.cts.com

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o,, @ o @ , ,o

Try Boatanchors
For A Real Lift

From boatanchors@theporch.com Thu May 25 19:20:47 1995

Date: Thu, 25 May 1995 14:20:47 -0500

Message-Id: <m0sEiPn-0010RNC@spider.lloyd.com>

From: jml@spider.lloyd.com (Jim Lockwood)

Subject: Re: Shack Art

Shack art, eh? Well, I don't know what art is, I know only what I like....

Current "art" includes an authentic WRL call zone map, and the only copies of my early licenses that I can find.

I've thought, though, about framing and hanging old QST and CQ ads for the equipment in the radio room. The room is kind-of a museum, and the casual visitor has NF idea what all those thingys with all the knobs and meters are. So, my thinking goes, having old advertisements on the wall might lend a nice touch and help explain all the gear.

And for the door leading to the radio room, I've got lined up a old, battered street sign that was sponsered by my Dad's drug-store years ago in my home town. It reads "Caution, Children at Play".

73,

Jim - km6nk

From boatanchors@theporch.com Fri May 26 02:03:43 1995

Date: Thu, 25 May 1995 21:03:43 -0500

Message-Id: <9505260201.AA25768@uvs1.orl.mmc.com>

From: padgett@tccslr.dnet.mmc.com (A. Padgett Peterson, P.E. Information Security)

Subject: Tick...tick...tick

Is wonderful and does raise the question "Which came first, the key or the ticker ?" Obviously this is a whole little explored country of mechanical devices, 110v dc, and rotors that could lead into such things as "the wire" used in The Sting and the Enigma cypher machine. A whole new hobby - wonder what the going rate is for a universal ticker ? Bet two could be connected using modems and a PC. Hoo boy 8*).

Warmly,
Padgett

aka "The ticker and the Polish question."

From boatanchors@theporch.com Thu May 25 09:01:53 1995
Date: Thu, 25 May 1995 04:01:53 -0500
Message-Id: <Pine.3.89.9505250328.A14508-0100000@indy3>
From: "Roberta J. Barmore" <rbarmore@indynet.indy.net>
Subject: RE: Tube shields

Hi!

On Wed, 24 May 1995 Michael.J.Knudsen@att.com wrote:
> Could conventional steel shields be improved by (a) painting them dull
> black inside, so they don't reflect as much heat back, and (b) painting
> them dull black on the outside?

Alas, the answer is "not enough." The primary means of heat-transfer from the tube in an IERC shield is conduction rather than radiation. The shiny bayonet-lock shields touch the tube only at the top, where the conical spring bears down. The poor tube is still trapped in a small volume of non-moving air in the non-IERC shield, no matter what color it is; there's very little heat-sink effect.

I used to really dislike IERC shields because they are so difficult to remove to test the tube. RCA pro gear used them a lot. But they had another beneficial effect: RCA also liked to use vertical chassis construction. In something like a transmitter or a videotape machine, where there's a lot of vibration, they ***really*** held the tubes in place well! So even though they were awkward, we always left 'em in place--it beat having tubes decide to leap to the floor!

73,
--Bobbi

From boatanchors@theporch.com Thu May 25 16:12:47 1995

Date: Thu, 25 May 1995 11:12:47 -0500
Message-Id: <9505251605.AA05773@ihurry.ih.att.com>
From: Michael.J.Knudsen@att.com
Subject: RE: Tube shields

I agree with Richard that there are 5 known sizes of IERC shields -- three heights of 7-pin (6BE6, 6AL5, and 6AQ5) and two for 9-pin tubes. Don't suppose they have G-octal size for my old Philcos :-)

Wonder if RCA ever tried to develop METAL 7 and 9-pin minis?
WOuld've solved the problem of radiation, but I hate metal octal tubes on an esthetic basis.

Problem: The R390A's sockets for the rectifier tubes have a very tall base (why?), so may be hard to retrofit IERC shields onto them. They are certainly the first tubes I'd try to fit the shields to.
--mike k w9nrd

From boatanchors@theporch.com Thu May 25 16:43:55 1995
Date: Thu, 25 May 1995 11:43:55 -0500
Message-Id: <d0aNVGe000000000@MHS>
From: RICHARD_HUMPHREY@hp5200.desk.hp.com
Subject: RE: Tube shields

Mike sez:
>three heights of 7-pin (6BE6, 6AL5, and 6AQ5) and two for 9-pin tubes. Don't suppose they have G-octal size for my old Philcos :-)

No, but the article in ER mentions a company called Pearl that makes tube coolers for the audio crowd. They have many sizes for all sorts of tubes. Need to find their catalog!

My junkbox also has an IERC socket and heat-sink shield for a sub-miniature, 'pencil' size tube. You know the ones Sylvania made with the wire leads. Trim the wires down to pins, plug it in the socket, and slide the shield on. I've saved it to build a really tiny QRP rig someday. Or a mini regen receiver.

>Wonder if RCA ever tried to develop METAL 7 and 9-pin minis?
>WOuld've solved the problem of radiation, but I hate metal octal tubes
>on an esthetic basis.

I agree. Where's the glow???? Phooey.

>Problem: The R390A's sockets for the rectifier tubes have a very tall base (why?), so may be hard to retrofit IERC shields onto them.

>They are certainly the first tubes I'd try to fit the shields to.

Huh? The IERCs plugged right onto my R-390A. They keep the 26Z5s running 'warmly' rather than HOTly. Just need to be sure the corrugated insert clears the socket base.

Where they don't fit are those weird sockets that National used in my HRO-50. The base goes half way up the tube and the shield has a long notch cut in each side to clear. They also don't work on the cheap, consumer grade slip-on shields that Hammarlund used in my HQ-100. I guess they used TV set sockets to keep the cost down on this low-cost set.

Richard
N6NAE

From boatanchors@theporch.com Thu May 25 18:13:04 1995
Date: Thu, 25 May 1995 13:13:04 -0500
Message-Id: <950525140901_12118378@aol.com>
From: KD0HG@aol.com
Subject: Re: Tube shields/R-390A

Have had no problem fitting 12AU7 sized IERC shields on the 26Z5W rectifiers in my R-390As. They snap right on. I applied some Wakefield power transistor thermal compound to the shield base attached to the chassis and inside the shield between the corrugated insert and the shield to improve heat sink action. This also makes it easier to remove the shield when it becomes necessary...Bill, KD0HG

From boatanchors@theporch.com Thu May 25 17:54:07 1995
Date: Thu, 25 May 1995 12:54:07 -0500
Message-Id: <9505251751.AA183503@rs2.ccd.harris.com>
From: dsnowden@ccd.harris.com (Doug Snowden)
Subject: Wrong Phone Number Given

I "think" I posted the wrong phone number for Ray Sumperl to those wanting to inquire about his garage full of ba's. If someone got through let me know. I just tried to call him with the 677-4952 number I gave, and I got the "you screwed up msg". I think it might be 676-4952 (ac 407). I'll confirm later. In the meanwhile you might try it tonight if you need to deal with him... Again sorry for the error.

Doug, N4IJ dsnowden@ccd.harris.com